

### **REMARKS**

Claims 1 through 20 are pending in this application. Claims 3 and 8 are amended in several particulars for purposes of clarity in accordance with current Office policy, to assist the examiner and to expedite compact prosecution of this application. Claims 11 through 20 have been newly added. The Applicant appreciates the Examiner's indication of allowability concerning claims 3 and 8.

#### **I. Specification**

A correction was made in order to assist the Examiner and to expedite the compact prosecution of the invention. In paragraph 41 phosphor screen was corrected from 51 to 51a as disclosed in the rest of the application.

#### **II. Drawings**

A correction was made in order to assist the Examiner and to expedite the compact prosecution of the invention. In figure 10A, reference 103b for the etched area on the upper end surface of the second dummy bridge was corrected to 103a. This correction is supported by for example the disclosure in paragraph 58.

Accordingly, a letter to the Office Draftsman accompanies this response. Indication in subsequent Office correspondence of the acceptance to the drawing corrections proposed in the

letter, is requested to enable applicant to timely arrange for the corrections to be made prior to the date for payment of any issue fee. No new matter was added.

### **III. REJECTION OF CLAIMS (35 U.S.C. § 103)**

Claims 1, 2, 4 through 7, 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable.

According to MPEP 706.02(j), the following establishes a *prima facie* case of obviousness under 35 U.S.C. §103:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

**A. Claims 1, 2, 4, 6, 7, and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ohmae (U.S. 6,388,370) in view of Ueda (US 5,856,725). The Applicant respectfully traverses.**

1. The combination of Ohmae and Ueda does not teach or suggest *a first etching boundary being formed at an end of said first dummy bridge near to the center of the tension mask being lower with respect to the screen than a second etching boundary formed at an end of said second dummy bridge near to the periphery of said tension mask* as seen for example in Claim 1 and 6.

The Examiner states that Ueda discloses a shadow mask where a slot comprises a first etching boundary formed at an end of a strip near the center of the shadow mask being lower with respect to the screen than a second etching boundary formed at an end of a second strip near to the periphery of the mask and the Examiner points to figure 5 of Ueda. However, looking at figure 5 of Ueda, within each set of slots, the etching boundary is arguably the same on the left and right sides for each slot. There is no clear teaching or suggestion of the first etching boundary being lower than the second etching boundary.

Further, the present invention is teaching about the etching at the portion around the dummy

bridge of the slot. The combination of Ueda and Ohmae does not discuss such a teaching. Figure 5 of Ueda cited by the Examiner relates specifically to figure 4 which shows that the close-ups in figure 5 are concerning portions of slots without dummy bridges. Ohmae shows a slot of a dummy bridge, but neither Ohmae or Ueda teaches or suggests of the etching portion around the dummy bridge.

2. Ueda should not be combined with Ohmae because it teaches away from the present invention because Ueda specifically teaches of only slots without dummy bridges.

The Examiner cited figure 5 of Ueda as a reference, however, figure 5 is along line V-V of figure 4 as mentioned in col. 3, line 19. Looking at figure 4, only slots without dummy bridges are seen along V-V or any other portion of figure 4. Claim 1 and 6 of the present invention, on the other hand mentions “a first etching boundary being formed at an end of *said first dummy bridge* near to the center of the tension mask being lower with respect to the screen than a second etching boundary formed at an end of *said second dummy bridge* near to the periphery of said tension mask.” Clearly from the specific disclosure of figure 4 of Ueda, Ueda is teaching away from application with dummy bridges.

3. The combination of Ohmae and Ueda does not teach or suggest *with the vertical*

*center axis of an etched area at the upper end surfaces of said first and second dummy bridges being offset from the vertical center axis of an etched area at the lower end surfaces of said first and second dummy bridges toward the center of said tension mask to accommodate a deflected electron beam being blocked* as seen for example in claim 2 and 7. Further, Ueda should not be combined with Ohmae because Ueda is also teaching away from the present invention because Ueda teaches of allowing reflections to pass through.

The Examiner states that the combination of Ohmae and Ueda discloses the offset in view of the rightmost drawing of Fig. 5 of Ueda. However, the combination does not teach or suggest the deflected electron beam being blocked. As seen in col. 4, lines 5-9, Uda states that with the configuration of figure 5, the outermost slots 42 intercept or reduce the quality of light directly incident while allowing reflections to pass through. In col. 4, lines 27-33, Ueda teaches “a part of the clots are formed so as to “intercept or reduce the quantity of among exposing light, direct light directly incident thereto while allowing reflections from, e.g., the casing of an exposing device to pass therethrough.” The present invention on the other hand is blocking the deflected electron beam from passing through the portion of the slot having the dummy bridges. Clearly Ueda is teaching away from the present invention and therefore should not be combined with Ohmae.

Even if Ohmae is combined with Ueda, still the combination fails to teach or suggest of dummy bridges having an offset that accommodates *a deflected electron beam being blocked* because Ohmae adds no further teaching or suggestion of such a limitation.

**B. Claims 1, 5, 6 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ohmae (U.S. 6,388,370) in view of Kobayashi (2002/0014821). The Applicant respectfully traverses.**

1. Kobayashi can be antedated by the priority document of the present invention.

The Applicant would like to respectfully note to the Examiner that the present invention has a foreign priority date (December 4, 2000) before the earliest possible effective U.S. filing date of the Kobayashi (US 2002/0014821) publication (July 23, 2001).

The Kobayashi (US 2002/0014821) publication can be antedated by the Korean priority document of the present invention by filing a sworn English translation under 37CFR1.51. Kobayashi was filed on July 23, 2001 in the United States. The present invention was filed in the United States on December 3, 2001. However, the priority document of the present invention was filed in Korea on December 4, 2000 which antedates the U.S. filing of Kobayashi. Under 35 USC §119, the present application can rely on the foreign priority date of December 4, 2000 which predates the Kobayashi (US 2002/0014821) publication filed on July 23, 2001 in the United States.

While the applicant does not admit that the cited reference is entitled to actual prior art status relative to the applicant's invention, even assuming, *arguendo*, that it is, the claimed invention is patentable thereover for reasons given below.

2. Kobayashi should not be combined with Ohmae because it teaches away from the

present invention because Kobayashi specifically teaches of only slots without dummy bridges.

The Examiner cited figure 3 of Kobayashi as a reference, however, figure 3 is along line I-I of figure 2 as mentioned in paragraph 33 of Kobayashi. Looking at figure 2, only slots without dummy bridges are seen along I-I or any other portion of figure 2. Claim 1 and 6 of the present invention, on the other hand mentions “a first etching boundary being formed at an end of *said first dummy bridge* near to the center of the tension mask being lower with respect to the screen than a second etching boundary formed at an end of *said second dummy bridge* near to the periphery of said tension mask.” Clearly from the specific disclosure of figure 2 of Kobayashi, Kobayashi is teaching away from application with dummy bridges.

3. The combination of Kobayashi and Ohmae does not teach or suggest *a first etching boundary being formed at an end of said first dummy bridge near to the center of the tension mask being lower with respect to the screen than a second etching boundary formed at an end of said second dummy bridge near to the periphery of said tension mask* as seen for example in Claim 1 and 6.

The present invention is teaching about the etching at the portion around the dummy bridge of the slot. The combination of Kobayashi and Ohmae does not discuss such a teaching. Figure 3 of Kobayashi, cited by the Examiner, relates specifically to figure 2 which shows that the close-ups in figure 3 are concerning portions of slots without dummy bridges. Ohmae shows a slot of a

dummy bridge, but neither Kobayashi or Ohmae teaches or suggests of the etching portion around the dummy bridge.

#### **IV. ALLOWABLE SUBJECT MATTER**

The Applicant appreciates the Examiner's indication of allowability of claims 3 and 8. The examiner stated that claims 3 and 8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Following the advice of the examiner, claims 3 and 8 were rewritten in independent form including all of the limitation of the base claim and any intervening claims. Therefore, claims 3 and 8 should be allowable.

#### **V. CONCLUSION**

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

A fee of \$252.00 is incurred by the addition of three (3) independent claims in excess of 3. Applicant's check drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is



authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

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Date: 28 April 2003  
I.D.: REB/SS/sb